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EXAMINER	
PROCTOR, JASON SCOTT	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/897,429	HALES, ROBERT J.	
	Examiner	Art Unit	
	Jason Proctor	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-31 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 16 July 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 12/3/2001.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-27 have been presented for examination.

2. Claims 1-27 have been rejected.

Priority

3. Applicant's claim for domestic priority under 35 U.S.C. § 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. § 112 for at least claims 10, 11, 13-17, and 21-26 of this application. The Examiner notes that provisional application 60/234,303 appears to be a sales presentation for CADDStar V6 that contains a list of features presumably present in the software but does not provide enabling material regarding these features. The Examiner notes that provisional application 60/236,040 appears to be a manual for CADDStar Map that explains how to use the software, but again fails to provide enabling material regarding the features of the software.

4. As a result, claims that are directed toward a human operator using the software on a computer as described by provisional application 60/234,303 will be regarded as having priority to September 21, 2000. Claims that are directed toward a specific computer system arrangement, which is wholly undisclosed in either provisional application, will be regarded as having a priority date of July 3, 2001. Claims that are directed toward interactions with the network modeled by the software, which is wholly undisclosed in either provisional application, will be regarded as having a priority date of

July 3, 2001. This situation further precipitates numerous rejections under 35 U.S.C. § 112, first paragraph, as explained below.

5. Claims 1-27 are regarded as having a priority date of September 21, 2000, except claims 10, 11, 13-17, and 21-26, which are regarded as having a priority date of July 3, 2001.

Request for Information

6. The Examiner notes that the provisional application 60/234,303 appears to be a sales presentation for CADDStar V6, submitted September 21, 2000. A thorough search of the prior art has produced a non-patent literature reference to a CADDStar software product that predates the provisional application. This reference has been included on form PTO-892. The Examiner respectfully requests that Applicant submit available materials corresponding to versions of CADDStar discussed in this reference, circa 1998, such as software manuals or other relevant documentation. Of particular interest to the Examiner would be documentation for CADDStar version 5.0.

Specification

7. The use of the trademark AutoCAD®, CADDStar®, and Internet Explorer® has been noted in this application. It should be capitalized wherever it appears and be

accompanied by the generic terminology. Applicant's attention is respectfully requested regarding figures 2, 3, and 9B, which include references to trademarks.

8. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

9. Claim 12 is objected to because of the following informalities: failure to end with a period. See MPEP 608.01(m). Appropriate correction is required.

Drawings

10. The drawings are objected to because they contain unattributed trademarks as explained in the objections to the specification. The drawings are objected to because the figure labels "FIG. 5(A)", "FIG. 5(B)", "FIG. 8(A)", "FIG. 8(B)", "FIG. 8(C)", "FIG. 9(A)", "FIG. 9(B)", "FIG. 12(A)", "FIG. 12(B)", "FIG. 15(A)", and "FIG. 15(B)" do not comply with 37 CFR 1.84(u). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-2, 4-12, 18-20, and 27 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

13. MPEP 2105 states:

> If the broadest reasonable interpretation of the claimed invention as a whole encompasses a human being, then a rejection under 35 U.S.C. 101 must be made indicating that the claimed invention is directed to nonstatutory subject matter. Furthermore, the claimed invention must be examined with regard to all issues pertinent to patentability, and any applicable rejections under 35 U.S.C. 102, 103, or 112 must also be made.

Claim 1 recites a non-statutory method that could be performed by a human being. The terms "storing", "associating", "selecting", and "reading" do not necessitate that a

computer system perform the method. The step "storing an attribute of an optical communication component in a catalog database entry" could refer to a human being performing data entry or to a computer-implemented database performing a storage function.

14. Claims 2 and 4-12 fail to establish the claimed invention as directed toward the technology arts. In contrast, claim 3 recites a step of recording in a computer memory and therefore establishes a method that interacts with a tangible computer system and statutory.

15. Claim 27 similarly recites a non-statutory method that could be performed by a human being. None of the recited steps are specifically directed to the technology arts.

16. MPEP 2106 states:

> Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, *Schrader*, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
> Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.
> [...]
> *In re Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in *Abele*, 684 F.2d at 907, 214 USPQ at 687).

17. While the preambles of claims 18, 19, and 20 recite a system for planning a network comprising a computer including a memory storage device having application software encoded therein, none of the claim limitations are directed to any tangible component of a computer system. These claimed inventions are, as a whole, computer software and therefore nonstatutory functional descriptive material.

18. To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. § 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 112

19. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claims 2, 3, 9, and 13-17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

21. Claim 2 refers to "said associating step" of claim 1 which renders the claim vague. Claim 1 recites two associating steps and it is unclear which associating step is referenced by claim 2. It is further unclear what is meant by "associating said attribute

of a component of a first iteration with said attribute of a component of a second iteration". The Examiner fails to find support for this or clarification in the specification.

22. Claim 3 refers to "said association" of claim 1 which renders the claim vague. Claim 1 recites two associating steps and it is unclear which association referenced by claim 3.

23. The term "between about one fiber and about 2600 fibers" in claim 9 renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For example, it is indefinite whether the intended scope of the invention would encompass all, some, or none of an optical cable comprising 2595, 2605, or 2650 fibers.

24. The term "substantially instantaneously identical" in claim 13 renders the claim indefinite. The term "substantially instantaneously" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For example, it is appreciated by the Examiner that one embodiment of the disclosed invention application data is mirrored between two servers (specification, page 12, lines 10-13), there is no explanation of the term "substantially instantaneous" and the relationship between the mirrored application data is indefinite.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claims 1-9, 12, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rappaport et al. US Patent No. 6,499,006 hereafter referred to as Rappaport.

27. Regarding claim 1, Rappaport teaches a method for designing a network comprising:

Storing an attribute of a communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Reading the attribute from the database entry (column 6, lines 40-44); and

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35).

Although Rappaport does not explicitly refer to a planned deployment of the network being designed, it would be obvious to a person of ordinary skill in the art at the

time of Applicant's invention that the disclosed invention, a network design tool, would be a useful part of deploying the network once it is designed.

Although the invention disclosed by Rappaport teaches a wireless network design tool, Rappaport does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6). It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention, in combination with his own knowledge of the particular art, to adapt Rappaport's invention for use with a fiber optical communication network in order to design and deploy a fiber optical communication network. The combination could easily be achieved by including fiber optical communication network components in the computer parts database taught by Rappaport (column 6, lines 36-60) and implementing the requisite placement and connection rules in the user interface.

28. Regarding claim 2, Rappaport teaches the user may repeat the process of placing components in the design (column 6, lines 36-44).

29. Regarding claim 3, Rappaport teaches a computer-implemented method (column 4, lines 33-50) and recording associations in a computer database (column 6, lines 40-49).

30. Regarding claim 4, Rappaport does not explicitly teach physically deploying a physical instance of the component. However, Rappaport does teach a network design

tool (column 5, lines 57-65; column 8, lines 23-35) and therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to physically deploy the network after it has been designed.

31. Regarding claims 5 and 6, Rappaport teaches identifying a geographic location for the network and displaying a graphical representation of the geographic location (column 4, lines 3-9; column 4, lines 33-38; column 8, lines 44-57).

32. Regarding claims 7-9 and 12, Rappaport does not explicitly teach components selected from the recited group, however the rejection formed in the rejection of claim 1 renders obvious the decision to incorporate the fiber optical communication network components necessary to adequately design a fiber optical communication network. The recited group of components would be included in the computer parts database taught by Rappaport and made available to the network designer (column 8, lines 23-35; column 6, lines 36-60).

33. Regarding claim 27, Rappaport teaches a method for designing a network comprising:

Defining a land base map (column 8, lines 44-56);

Defining a plurality of network component including cable segments (column 6, lines 36 – 54);

Associating each component with a location in the land base (column 6, lines 36-54);

Associating the first components with the second components (column 6, lines 36-54);

Calculating signal loss through the components (column 7, lines 11-48); and

Displaying the land base map and signal loss calculation result (Figs. 6-9; column 7, lines 11-48).

Although the invention disclosed by Rappaport teaches a wireless network design tool, Rappaport does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6). It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention, in combination with his own knowledge of the particular art, to adapt Rappaport's invention for use with a fiber optical communication network in order to design and deploy a fiber optical communication network. The combination could easily be achieved by including fiber optical communication network components in the computer parts database taught by Rappaport (column 6, lines 36-60) and implementing the requisite placement and connection rules in the user interface.

34. Claims 10-11 and 21-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rappaport as applied to claim 1 above, and further in view of Bergholm et al. US Patent No. 5,761,432 hereafter referred to as Bergholm.

35. Regarding claims 10 and 11, Rappaport does not explicitly teach identification of network components with an owner or with a communication circuit.

Bergholm teaches a method for network administration and design (column 2, lines 39-63) wherein network components (exemplified by links) are identified as belonging to circuits (network hierarchy) and have attributes such as ownership (column 4, lines 13-24).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to arrive at a network design method that exhibits the desired functions of the prior art. The combination could be achieved by including ownership and circuit attributes in the network design method taught by Rappaport, and specifically where the user modifies the properties of network components (column 8, lines 23-35).

36. Regarding claim 21, Rappaport teaches a software method for designing a network comprising:

Storing an attribute of a communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not teach a system of computers including a first and second computer connected through a communications link and sharing the logical model through the link.

Bergholm teaches a system of computers including a client server architecture including a central server coupled to a plurality of workstations (column 14, lines 14-45). Bergholm teaches that the server stores application software (column 14, lines 57-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the software method for designing a network taught by Rappaport with the client server architecture taught by Bergholm to produce a software method with improved ease of access for plural designers. The combination could be achieved by implementing the software method taught by Rappaport using a central computer components database and transmitting the logical model through the network.

Although Rappaport does not explicitly refer to a operatively connecting the cables of the modeled network, it would be obvious to a person of ordinary skill in the art at the time of Applicant's invention that the disclosed invention, a network design tool, would be a useful part of deploying the network once it is designed.

37. Regarding claim 22, neither Rappaport nor Bergholm explicitly teach a step of transmitting a notice of completion of the connection of physical cables through the link into the first computer. However, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention in combination with his own knowledge of the particular art to relay such information through a connection in order to notify a user at a remote workstation of a change in the status of the network. Such a feature could be achieved with electronic mail.

38. Regarding claim 23, Rappaport teaches modifying the graphically represented logical model (column 6, lines 36-48). Bergholm teaches a client server architecture where a logical model of a network can be modified and transmitted through a network (column 3, lines 6-14; column 14, lines 14-45). This combination is established in the rejection of claim 21 above.

Neither Rappaport nor Bergholm explicitly teach receiving authorization for operatively connecting two communication cables, however it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention in combination with his own knowledge of the particular art to relay such information through a connection in order to notify a user at a remote workstation of authorization to change the status of the network. Such a feature could be achieved with electronic mail.

39. Regarding claim 24, Rappaport teaches characterizing the signal strength of a radio frequency signal as a function of geographic location (Figs. 6-9; column 7, lines 11-48).

40. Regarding claims 25 and 26, Rappaport teaches a software method for designing a network comprising:

Storing an attribute of a communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not teach a system of computers including a first and second computer, the second being a laptop, connected through a communications link and sharing the logical model through the link.

Bergholm teaches a system of computers including a client server architecture including a central server coupled to a plurality of workstations (column 14, lines 14-45). Bergholm teaches that the server stores application software (column 14, lines 57-60).

Bergholm refers to the server as a "central site" and describes an alternative configuration with "work group sites" (column 14, lines 22-45).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the software method for designing a network taught by Rappaport with the client server architecture, including laptop computers, taught by Bergholm to produce a software method with improved ease of access for plural designers. The combination could be achieved by implementing the software method taught by Rappaport using a central computer components database and transmitting the logical model through the network.

Although Rappaport does not explicitly refer to a operatively connecting the cables of the modeled network, it would be obvious to a person of ordinary skill in the art at the time of Applicant's invention that the disclosed invention, a network design tool, would be a useful part of deploying the network once it is designed.

41. Claims 13-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rappaport in view of Bergholm and in view of Tonelli et al. US Patent No. 5,821,937 hereafter referred to as Tonelli.

Regarding claim 13, Rappaport teaches a software method for designing a network comprising:

A catalog portion adapted to receive data defining a plurality of communication network components (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

A data portion indicating a logical model of a communications network (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not explicitly teach a design profile portion adapted to receive data defining a plurality of design rules.

Tonelli teaches a system for designing a network (column 2, lines 39-63) wherein a plurality of design rules define how a logical model of a network may be constructed (column 4, lines 44-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of prior art to produce a network design tool that can validate the design choices made by the user so as to reduce problems when deploying the network. The combination could be achieved by including the rules information in the computer parts database taught by Rappaport so the software can prevent the user from making invalid selections.

Rappaport does not teach a system of computers including a first computer storing application software and second and third computers sharing mirrored project data.

Bergholm teaches a system of computers including a client server architecture including a central server coupled to a plurality of workstations (column 14, lines 14-45). Bergholm teaches that the server stores application software (column 14, lines 57-60). The functionality provided by client server architecture, including synchronization of application data, is regarded as well known in the art.

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the software method for designing a network taught by Rappaport with the client server architecture taught by Bergholm to produce a software method with improved ease of access for plural designers. The combination could be achieved by implementing the software method taught by Rappaport using a central computer components database and executing the application software remotely.

42. Regarding claim 14, Rappaport does not explicitly teach designing a network having an optical fiber portion, but does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6).

Bergholm teaches a system for designing a network (column 2, lines 39-63) including an optical fiber portion (column 4, lines 25-33).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to produce a network design tool that can design networks having an optical fiber portion so as to enable designers more flexibility in their design. The combination could be achieved by

including optical fiber network components in the computer parts database taught by Rappaport (column 6, lines 36-60).

43. Regarding claim 15, Rappaport does not explicitly teach an optical cable having a buffer with first and second fibers, said fibers having different nominal characteristics, however the rejection formed in the rejection of claim 14 renders obvious the decision to incorporate the fiber optical communication network components necessary to adequately design a fiber optical communication network. The recited group of components would be included in the computer parts database taught by Rappaport and made available to the network designer (column 8, lines 23-35; column 6, lines 36-60).

44. Regarding claim 16, Rappaport teaches a software method for designing a network comprising a wireless communication portion (column 5, lines 52-65).

45. Regarding claim 17, Rappaport teaches a software method for designing a network comprising a detail notes portion adapted to record a detailed layout of a network within an office environment, functionally equivalent to a multiple dwelling unit (Figs. 2 and 3; column 4, lines 14-33).

46. Regarding claim 18, Rappaport teaches a software method for designing a network comprising:

A catalog portion adapted to receive data defining a plurality of communication network components (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

A data portion indicating a logical model of a communications network (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not explicitly teach a design profile portion adapted to receive data defining a plurality of design rules.

Tonelli teaches a system for designing a network (column 2, lines 39-63) wherein a plurality of design rules define how a logical model of a network may be constructed (column 4, lines 44-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of prior art to produce a network design tool that can validate the design choices made by the user so as to reduce problems when deploying the network. The combination could be achieved by including the rules information in the computer parts database taught by Rappaport so the software can prevent the user from making invalid selections.

Rappaport does not explicitly teach designing a network having an optical fiber portion, but does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6).

Bergholm teaches a system for designing a network (column 2, lines 39-63) including an optical fiber portion (column 4, lines 25-33).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to produce a network design tool that can design networks having an optical fiber portion so as to enable designers more flexibility in their design. The combination could be achieved by including optical fiber network components in the computer parts database taught by Rappaport (column 6, lines 36-60).

47. Regarding claim 19, Rappaport teaches a software method for designing a network comprising:

A catalog portion adapted to receive data defining a plurality of communication network components (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

A data portion indicating a logical model of a communications network (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not explicitly teach a design profile portion adapted to receive data defining a plurality of design rules.

Tonelli teaches a system for designing a network (column 2, lines 39-63) wherein a plurality of design rules define how a logical model of a network may be constructed (column 4, lines 44-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of prior art to produce a network design tool that can validate the design choices made by the user so as to reduce problems when deploying the network. The combination could be achieved by including the rules information in the computer parts database taught by Rappaport so the software can prevent the user from making invalid selections.

Rappaport does not explicitly teach designing a network having an optical fiber portion, but does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6).

Bergholm teaches a system for designing a network (column 2, lines 39-63) including an optical fiber portion (column 4, lines 25-33).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to produce a network design tool that can design networks having an optical fiber portion so as to enable designers more flexibility in their design. The combination could be achieved by including optical fiber network components in the computer parts database taught by Rappaport (column 6, lines 36-60).

Rappaport does not explicitly teach an optical cable having a buffer with first and second fibers, said fibers having different nominal characteristics, however the rejection

formed in the rejection of claim 14 renders obvious the decision to incorporate the fiber optical communication network components necessary to adequately design a fiber optical communication network. The recited group of components would be included in the computer parts database taught by Rappaport and made available to the network designer (column 8, lines 23-35; column 6, lines 36-60).

48. Regarding claim 20, Rappaport teaches a software method for designing a network comprising:

A catalog portion adapted to receive data defining a plurality of communication network components (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

A data portion indicating a logical model of a communications network (column 8, lines 23-35);

Calculating power and signal relationships within the communications network (column 7, lines 10-48);

Rappaport teaches a software method for designing a network comprising a wireless communication portion (column 5, lines 52-65); and

Rappaport teaches that one of the network components includes an antenna (column 6, lines 40-54).

Rappaport does not explicitly teach a design profile portion adapted to receive data defining a plurality of design rules.

Tonelli teaches a system for designing a network (column 2, lines 39-63) wherein a plurality of design rules define how a logical model of a network may be constructed (column 4, lines 44-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of prior art to produce a network design tool that can validate the design choices made by the user so as to reduce problems when deploying the network. The combination could be achieved by including the rules information in the computer parts database taught by Rappaport so the software can prevent the user from making invalid selections.

Rappaport does not explicitly teach designing a network having an optical fiber portion, but does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6).

Bergholm teaches a system for designing a network (column 2, lines 39-63) including an optical fiber portion (column 4, lines 25-33).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to produce a network design tool that can design networks having an optical fiber portion so as to enable designers more flexibility in their design. The combination could be achieved by including optical fiber network components in the computer parts database taught by Rappaport (column 6, lines 36-60).

Conclusion

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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